

Claim 1 has been amended to overcome the rejection thereto. In particular, claim 1 has been amended to clarify that not only "parts of the probe are disposed outside the housing", but that least some of these parts include electrical connections. As a result of this arrangement, a current limitation (a fuse) is needed. No new matter has been added. The limitation added to claim 1 is shown in Fig. 3, where not only the probe (25, 26) but also parts of the electrical connection (conductor strips 10) are disposed outside the housing 31. None of the prior art including Tani have parts of the probe disposed outside the housing that can be considered electrical connections between the probe and the electronic module.

Another important difference between the prior art and the claimed invention, is that in the device of the claimed invention the fuses are made of constrictions in the conductor strips that form the electrical connections. This important distinction is found in claim 1, wherein:

The probe . . . being supplied with electrical power over a plurality of electrical connections . . . a fuse is provided in the electrical connections, . . .

the probe,  
the electrical  
connections comprise conductor strips,  
the fuse is formed by the housing of the electronic module.

The combination of the cited prior art does not lead to the claimed invention nor does such a combination provide the advantages of the invention. Only the combination of the features of claim 1 lead to a simple and low cost safe device. Such a device is not obvious from the cited prior art. Particularly, since the combination of the prior art cited by the Examiner would lead to a fuse that is not placed in the electrical connection between the electronic module and the probe, it is placed at the input side of the electronic module, as in the Bruch device. The fuse would be a costly separate part, having an extra housing, as in the Yoshikawa device, and the electrical connection would not

comprise conductor strips, but would require extra wiring, as in the Nakamura device (contacts T1-T6, in Figs. 1A and 2 or contacts 49a-f in Figs. 24 and 25).

The Board of Patent Appeals and Interferences held that when the references do not suggest the claimed combination

“... the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed combination to have been obvious in light of the teachings of the references (emphasis added).” Ex Parte Clapp, 227 U.S.P.Q. 973 (POB Pat App U& Inter. 1985).

No such reasoning is found in the Office Action.

There is no suggestion in the cited prior art that would lead one of ordinary skill in the art of position measuring systems to attempt a combination of these references to achieve the invention as claimed in amended claim 1. Claims 3-5 and 7-9 depend on claim 1 and are allowable for the same reasons claim 1 is allowable and further because of specific features recited therein which, when taken alone and/or in combination with the features recited in claim 1, are not disclosed or suggested in the prior art.

### CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance, and allowance of the application is respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects, in order to place the case in condition

for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's amendment and the case passed to issue.

Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Respectfully Submitted,



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Claim as amended

Serial No. 09/711,547  
Applicant: Peter Fischer

1. (Amended) A scanning device for a position measuring system for scanning a scale graduation comprising:

a probe being operatively connected with the scale graduation and being supplied with electric power over a plurality of electrical connections;

an electronic module being electrically coupled to the probe;

a housing of the electronic module for shielding the electronic module from the surroundings, with at least parts of the probe and parts of the electrical connections being disposed outside the housing; and

means for limiting the supply of current to the probe, wherein at least one fuse is provided in the electrical connections, leading to the probe, within the housing, for interrupting the flow of current to the probe when the temperature produced as a result of the current flow exceeds a specific value, wherein the at least one fuse is formed by a sectional constriction of a cross section of the electrical connections and the electrical connections comprise conductor strips and wherein the housing of the electronic module further forms the housing of the at least one fuse.